REMARKS

In accordance with the foregoing, claims 2, 6, 10-12, 16-17, and 21 are amended. No new matter is presented in any of the foregoing and, accordingly, approval and entry of the amended claims are respectfully requested.

Claims 1-2, 4-6, 8-17, and 21 are pending and under consideration.

ENTRY OF AMENDMENT UNDER 37 CFR §1.116

Applicant requests entry of this Rule 116 Response because it is believed that the amendment of claims 2, 6, 10-12, 16-17, and 21 puts this application into condition for allowance and should not entail any further search by the Examiner since no new features are being added or no new issues are being raised.

Claims 2, 10, and 16 are amended to respectively recite a communicating system, a computer-readable recording medium, using claim 2 as an example, including "a first receiving module capable of receiving data from a network, the data obtained by: converting a first protocol at an application layer level, for data transmitted from the client to the server, into a second protocol at the application layer level, the second protocol allowing an increase of a size of a data transfer window for a transport layer protocol so that a larger amount of data can be transferred at one time than with a data transfer window whose size is not increased, and by multiplexing data of multiple connections so that a connection with an increased window size in the transport layer protocol level can be used continuously, and the larger amount of data is transmitted to the network by continuously using the second protocol."

Claims 6, 11, and 17 are amended to respectively recite a communicating system and a computer-recording medium, using claim 6 as an example, including "a first receiving module capable of receiving data transmitted from the client to the server; a first converting module capable of converting a first protocol at an application layer level of the received data into a second protocol at the application layer level, the second protocol allowing an increase of a size of a data transfer window for a transport layer protocol so that a larger amount of data can be transferred at one time than with a data transfer window whose size is not increased; a multiplexing module capable of multiplexing data of multiple connections converted by said first converting module so that a connection with an increased window size in the transport layer protocol level can be used continuously."

Claims 12 and 21 are amended to respectively recite a method, using claim 12 as an example, including "forming a virtual tunnel having a multiplexing protocol, where a size of a data transfer window in a transport protocol sent within the multiplexing protocol can be increased."

No new matter is presented in any of the foregoing and, accordingly, approval and entry of the amended claims are respectfully requested.

ITEMS 8-14: REJECTION OF CLAIMS 1-2, 4-6, 8-17 and 21 UNDER 35 U.S.C. §112, SECOND PARAGRAPH

In items 8-14 of the Office Action, the Examiner rejects claims 1-2, 4-6, 8-17 and 21 under 35 U.S.C. §112, second paragraph, as being indefinite.

Claims 2, 6, 10-12, 16-17, and 21 are amended herein to address each of the Examiner's concerns. In particular, claims 2, 6, 10-12, 16-17, and 21 are amended herein, as applicable, to include clarification that:

1) that the "first protocol" and the "second protocol" are both "at an application layer level,"

2) that the second protocol allows an "increase of a size of a data transfer window for a transport layer protocol so that a larger amount of data can be transferred at one time than with a data transfer window whose size is not increased," and

3) replacing the term "device" with --module--, as suggested by the Examiner.

Summary

Applicant submits that claims 1, 2, 4-11, and 15-17 comply with 35 U.S.C. §112, second paragraph and request withdrawal of the rejection.

TRAVERSE OF REJECTIONS UNDER 35 U.S.C. §102(e) AND 35 U.S.C. §103(a)

The Examiner rejects claims 2, 6, 10-11,16-17 and 21 under 35 U.S.C. §102(e) as being anticipated by Sridhar et al. (US 6,266,701), rejects claim 12 under 35 U.S.C. §102(e) as being anticipated by Toporek et al. (US 6,460,085), rejects claims 1, 4-5, 9, and 15 under 35 U.S.C. §103(a) as being unpatentable over Sridhar in view of combinations of Toporek and Kirkby, and rejects claims 13-14 under 35 U.S.C. §103(a) as being unpatentable over Toporek in view of Kirkby.

The Examiner's support for the present rejections is repeated from the previous Office Action mailed June 27, 2005. Further, in items 3-7 entitled Response to the Arguments the Examiner contends, for example, that "nothing in the current claims states that the communication channel is bidirectional or improves throughput associated with a data-upload;" and that "Toporek contains explicit disclosure of a changing window size."

The rejections are traversed.

Applicant submits that features recited by each of the independent claims, all as amended herein, are not taught by the art, alone or combined in a manner as suggested by the Examiner.

Increasing A Size Of A Window Not Taught By The Cited Art

Independent claim 2, 10, and 16, all as amended, respectively recite a system, and a medium, using claim 2 as an example, including "converting a first protocol at an application layer level . . . into a second protocol at the application layer level, the second protocol allowing an increase of a size of a data transfer window for a transport layer protocol so that a larger amount of data can be transferred at one time than with a data transfer window whose size is not increased, and by multiplexing data of multiple connections so that a connection with an increased window size in the transport layer protocol level can be used continuously, and the larger amount of data is transmitted to the network by continuously using the second protocol (emphasis added.)"

Claims 6, 11, and 17, all as amended, respectively recite a system and a medium , using claim 6 as an example, including " multiplexing data of multiple connections converted by said first converting module so that a connection with an increased window size in the transport layer protocol level can be used continuously (emphasis added)."

Claims 12 and 21, both as amended, respectively recite a method, using claim 12 as an example, including "forming a virtual tunnel having a multiplexing protocol, where a size of a data transfer window in a transport protocol sent within the multiplexing protocol can be increased (emphasis added)."

Applicant submits that none of the cited art, alone or in combination, teaches such an increase.

Sridhar does not teach increasing a window size. Rather, Sridhar merely teaches (see, for example col. 11, lines 15-20) a network in which:

> both the first and third, TCP, segments and the second, XTP, segment operate with a sliding window sizes of four packets and each packet is explicitly acknowledged.

(Emphasis added).

Further, Applicant submits that Toporek's teachings can not be relied on in support of an increase of window size, as the Examiner incorrectly contends. Rather, Toporek merely teaches (see, for example cols. 16 and 17 starting at line 16):

> (i)f the protocol buffer has become saturated, then in a step 404, the satellite protocol reduces a maximum receive window for data that will be accepted across the satellite link 385 by a reduction factor. In a presently preferable embodiment, a reduction factor of 50% can be used. . . . an minimum value for the receive window can be configured to assure that the window is not reduced to zero. Otherwise, if a client is receiving at a data rate comparable to the data rate of the system, then the saturation condition will not be reached.

(Emphasis added).

That is, the objective of Toporek (col. 17, lines 49-52) is so that "(t)he present system allowed the client to take advantage of the available bandwidth regardless of the window size of the client or server."

Applicant submits that such discussions indicate that Toporek teaches away from increasing window size.

Kirkby does not teach any increase in window size.

Increase Is Bidirectional

Applicant also points out to the Examiner that each of the independent claims (even before the amendment herein), using claim 2 as an example, recited:

1) a first receiving module capable of receiving data from a network "for data transmitted "from the client to the server," and

2) a second receiving module capable of receiving data transmitted from the server to the client.

That is, the claims recited an aspect of the present invention that is bidirectional and with an increase of throughout in both directions. As a result it is possible to improve not only a throughput associated with a data download from a server to a client, but in addition to improve a throughput associated with a data upload from the client to the server. Consequently the speed of either data-download or of data-upload is increased.

Sridhar merely discusses (see, for example col. 5, lines 4-18):

> alternative transport or application layer protocols are used, rather than the protocols used by the applications, on all or a portion of the communication path joining two applications.

That is, Sridhar does not teach, and thus cannot improve, a throughput associated with data-upload from a client to a server.

Further, a combination of the cited art does not teach these features.

Summary

Since features recited by claims 2, 6, 10-12, 16-17, and 21 are not discussed by the cited art, alone or in combination, and *prima facie* obviousness is not established, the rejection should be withdrawn and claims allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

If there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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